

REMARKS

The Office Action objects to the drawings; rejects claims 1, 3-5 and 16 under 35 U.S.C. § 102(e); and rejects claim 2 under 35 U.S.C. § 103(a). Claims 1-5 and 16 are pending in this application. Claim 1 has been amended and new claims 18 and 19 have been added. Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Versions with Markings to Show Changes Made.**" Applicant respectfully submits that the objection and rejections have been overcome or are improper in view of the amendments and for the reasons set forth below.

At the outset, the Examiner objects to the drawings filed on July 30, 1999. Specifically, the Examiner states that Figure 1 should be in English. Applicants previously addressed this objection by filing amended Figure 1 on September 21, 2001. Amended Figure 1 is in English. Accordingly, Applicants respectfully request that this objection be withdrawn.

Claims 1, 3-5 and 16 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,184,609 (*Johansson*). Applicants conducted a telephone interview with the Examiner on February 18, 2002. The Examiner mailed an Interview Summary to Applicants on February 26, 2002. During the interview, it was agreed upon that the present invention is distinguishable over *Johansson*. Specifically, the Examiner agreed that the present invention is distinguishable over *Johansson* because each layer contains only a single hexagonal element and because each single element is maximized within the circular housing. Further, Applicants and Examiner agreed that either of the above features, if added to claim 1, would distinguish the present invention from *Johansson*.

In this regard, claim 1 has been amended to include the feature that each piezoelectric layer is formed as only one single element of hexagonal cross-sectional geometry. Applicants respectfully submit that amended claim 1 is clearly patentable over *Johansson*. Further, claims 3-5 and 16 all depend, either directly or indirectly, from independent claim 1. Thus, claims 3-5 and 16 are clearly patentable over *Johansson*. Accordingly, Applicants respectfully request that this rejection be withdrawn and claims 1, 3-5 and 16 be allowed.

Furthermore, new claims 18 and 19 each include the feature that each single element is maximized within the circular housing. Accordingly, Applicants respectfully request that new claims 18 and 19 be allowed.

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,184,609 (*Johansson*). Claim 2 depends from claim 1. Above, Applicant has argued that amended claim 1 is clearly patentable over *Johansson*. Thus, Applicant respectfully submits that claim 2 is patentable over *Johansson* based on the arguments presented above.

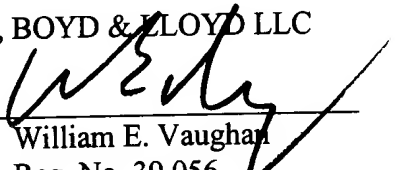
For the foregoing reasons, Applicants respectfully request reconsideration of the present application and earnestly solicit an early allowance of same.

It is further noted that no fees are due in connection with this application at this time. However, if any fees are due in connection with this application as a whole, the office is authorized to deduct said fees from Deposit Account No. 02-1818. If such a withdrawal is made, please indicate the Attorney Docket No. (112740-004) on the Account Statement.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claim 1 has been amended as follows:

1. (Twice Amended) A piezoelectric multilayer actuator of hexagonal cross-sectional geometry, comprising:

at least two individual piezoelectric layers, each piezoelectric layer formed as a only one single element of hexagonal cross-sectional geometry;

at least two electrodes, wherein the electrodes are alternately layered with the piezoelectric layers; and

a housing of circular cross-section.

New claims 18 and 19 have been added.



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